

# Amplified Signal Finder™ Indoor TV/FM Antenna

15-1870

OWNER'S MANUAL — Please read before using this equipment.

## ! IMPORTANT !

If an icon appears at the end of a paragraph, go to the box on that page with the corresponding icon for pertinent information.

- |             |               |
|-------------|---------------|
| ⚠ — Warning | ! — Important |
| ⚡ — Caution | 💡 — Hint      |
| ✓ — Note    |               |

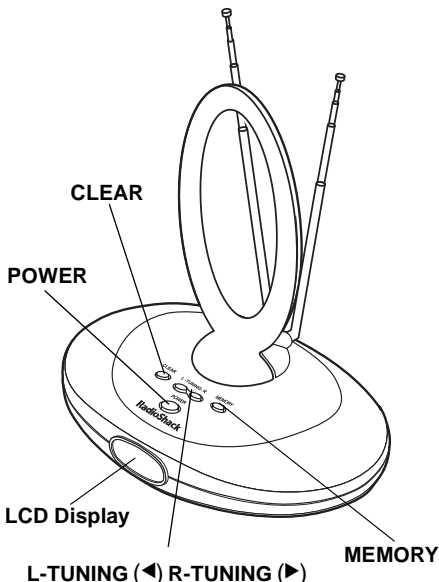
## NOTE

- You must have a TV remote control to program memory into this antenna.
- Learned codes are stored until you delete them. For example, if you move to a new location, you might need to delete some of the stored codes and add new codes. (See "Deleting Stored Antenna Angles" on Page 3).

## FCC DECLARATION OF CONFORMITY

This device complies with Part 15 of the *FCC Rules*. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Product:	Amplified Signal Finder™ Indoor TV/FM Antenna
Model:	15-1870
Responsible Party:	RadioShack 100 Throckmorton Fort Worth, TX 76102
Phone:	817-415-3200



Thank you for purchasing the RadioShack Amplified Signal Finder™ Indoor TV/FM Antenna. Your antenna's IR learning technology lets you program the VHF/UHF antenna angle for each channel into its memory for the best reception. Then you can use your remote control to select the desired local TV channel, the antenna automatically moves to the location you programmed into its memory. For example, when you select channel 10 with your remote control, the antenna automatically moves to the best reception position that you set for channel 10. ✓

Your antenna's features include:

**IR Learning** — learns TV remote control's or universal remote control's TV channel selection and selects the best reception antenna angle.

**Microprocessor Controlled Antenna Rotating Control** — lets you rotate the antenna 180° clockwise or counterclockwise for the best UHF or VHF reception.

**50 Memorized Antenna Angles** — lets you use your remote control to select up to 50 channels (1-99) and the corresponding antenna position that provides the best reception.

**Auto-Switching Function** — automatically switches between the antenna or an external signal (such as cable, satellite, or video game system).

**Manual Controls** — let you adjust the antenna when your TV's remote control is not available.

**Memory Cell** — lets you store a learned code until you delete it. ✓

**Display** — indicates the antenna status.

**Built-in Amplifier Gain Control** — lets you amplify weak VHF/UHF/FM signal.

**Gold Plated "F" Female Connector** — ensures best connection for the external input port.

<b>WARNING:</b> To reduce the risk of fire or shock hazard, do not expose this product to rain or moisture.		
	<b>CAUTION</b>	
<b>RISK OF ELECTRIC SHOCK DO NOT OPEN</b>		
<b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER OR BACK. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.		
	The lightning symbol is intended to alert you to the presence of uninsulated dangerous voltage within this product's enclosure that might be of sufficient magnitude to constitute a risk of electric shock. Do not open the product's case.	
	The exclamation symbol is intended to inform you that important operating and maintenance instructions are included in the literature accompanying this product.	

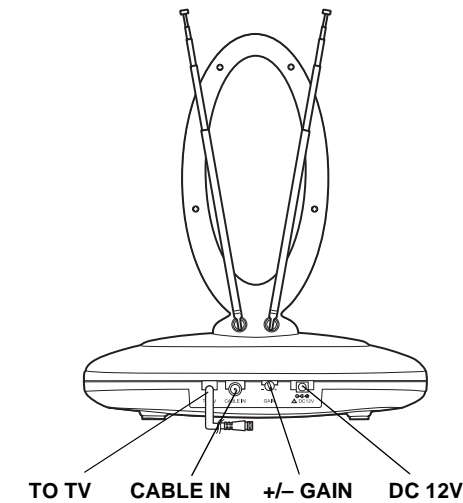
**CAUTION**

- You must use a Class 2 power source that supplies 12V DC and delivers at least 500 mA. Its center tip must be set to positive and its plug must fit the antenna's **DC 12V** jack. The supplied adapter meets these specifications. Using an adapter that does not meet these specifications could damage the antenna or the adapter.
- Always connect the AC adapter to the antenna before you connect it to AC power. When you finish, disconnect the adapter from AC power before you disconnect it from the antenna.

**NOTE**

- Your local RadioShack store has accessories you can use to connect the antenna to your TV set or FM receiver if they do not have a 75-ohm antenna terminal.
- We recommend you using your existing TV remote control to learn channel and antenna angle settings so you can control your TV and this antenna synchronously.
- If the antenna does not learn the remote control signals properly, adjust the distance between them until the antenna learns the signal.
- The antenna is preset to learn 15 function signals in sequence. If you do not press the keys in the same sequence as Step 4, the antenna may not function properly.
- The antenna learns one key at a time. Each time you press a remote control's key, the antenna learns that key. **Ln** appears, confirming that the key was successfully stored. Press the next key when **Ln** appears.
- During the learning process, if you do not press each function key on the remote control within 10 seconds, the antenna automatically turns off and you must start again at Step 1.
- On a universal remote control, you can assign the equivalent keys like MEM, RESET, ◀/REW, and FFWD/▶ for **MEMORY**, **CLEAR**, **L-TUNING** (◀) and **R-TUNING** (▶) functions.
- If you press **MEMORY** for 4 seconds after the antenna completes learning, the previously learned signals will be deleted. Use the existing remote control or universal remote control and begin signal learning again from Step 1.
- Be sure the antenna's learning setup does not affect the setup of other existing equipment.
- **99** appears when you turn on the antenna's power for the first time.
- Pressing **MEMORY** for 4 seconds deletes the previously learned signals but does not delete the stored antenna angles.

## INSTALLATION



Power the antenna using the supplied 12V, 500 mA AC adapter. ⚡

1. Place the antenna on or near your TV set or FM receiver.
2. Connect the antenna's coaxial cable to your TV set's 75-ohm UHF/VHF terminal or your FM receiver's 75-ohm antenna terminal. ✓
3. If you want to use a second video source such as cable TV, a satellite dish, or a video game system, connect it to the antenna's **CABLE IN** terminal using a 75-ohm coaxial cable/connector (not supplied) (See "Setting a Secondary Source" on Page 3).
4. Insert the supplied AC adapter's small barrel plug into the **DC 12V** jack on the back of the antenna's base.
5. Plug the AC adapter into a standard AC outlet. □□ appears to indicate the power is turned off.

## USING THE LEARNING FUNCTION

Your antenna can learn up to 15 remote control functions from the remote control so you can adjust the antenna angle by using the remote control. To learn all 15 remote control functions, your TV's remote control must have the equivalent **MEMORY**, **CLEAR**, **L-TUNING** (◀) and **R-TUNING** (▶) keys to replace same key functions on the antenna. If not, just set the antenna to learn 11 signals and manually press the above four keys on the antenna base during the operation. The antenna uses the latest integrated circuit recording technology to retain the learned function even if AC power fails. ✓

1. Be sure the antenna's power is turned off. □□ appears.

2. Hold down **MEMORY** on the antenna base for 4 seconds until **Ln** appears.
3. Point the remote control at the display on the front of the antenna base.
4. If your remote control has the equivalent keys to replace the antenna's **MEMORY**, **CLEAR**, **L-TUNING** (◀) and **R-TUNING** (▶) functions, press the following 15 keys in sequence: ✓

POWER → 1 → 2 → 3 → 4 → 5 → 6 →

7 → 8 → 9 → 0 → MEMORY → CLEAR

→ L-TUNING → R-TUNING

□□ appears when learning is complete.

If the remote control does not have the equivalent keys to replace **MEMORY**, **CLEAR**, **L-TUNING**, and **R-TUNING** functions, press the following 11 keys in sequence. Then press **MEMORY** to complete learning. ✓

POWER → 1 → 2 → 3 → 4 → 5 → 6 →

7 → 8 → 9 → 0

□□ appears when learning is complete.

## MEMORIZING THE ANTENNA ANGLES

The antenna can store up to 50 memorized best reception antenna angles, selecting from channel 1-99. Follow these steps to store the antenna angles for the selected channels.

1. Point the remote control at the TV to turn on the TV and the antenna. **99** or the last set channel number appears on the antenna's display.
2. Use the remote control to enter the desired channel number on the antenna. For example, press 0 then 2 for channel 2. The selected channel number appears for a few seconds, **Er** flashes briefly, then the channel number appears on the antenna's display window.
3. Press **L-TUNING** (◀) and **R-TUNING** (▶) on the antenna base or the assigned **L-TUNING** (◀) and **R-TUNING** (▶) keys on the remote control to adjust the antenna angle until your TV gets the best reception for that channel.
4. Press **MEMORY** on the antenna base or the assigned **MEMORY** key on the remote control. -- flashes.

5. Enter that selected channel number for storing the best reception antenna angle. Press **MEMORY** on the antenna base or the assigned MEMORY key on the remote control. The stored channel number appears.

## RECALLING THE STORED ANTENNA ANGLE

- Press the power key on the remote control to turn on the antenna.
- Enter the desired UHF/VHF channel number. The antenna automatically turns to the stored angle for that channel.

TV Bands	Channels
VHF-LO	2-6
VHF-HI	7-13
UHF	14-69

- To adjust the FM receiver's antenna angle, press the assigned L-TUNING (◀) and R-TUNING (▶) keys on the remote control, or **L-TUNING** (◀) and **R-TUNING** (▶) on the antenna base, until the receiver gets the best reception.

## DELETING STORED ANTENNA ANGLES

### DELETING AN INDIVIDUAL ANTENNA ANGLE

- Be sure the antenna's power is turned on.
- Press the assigned CLEAR key on the remote control, or **CLEAR** on the antenna base. -- flashes.
- Enter the desired channel number then press the assigned CLEAR key on the remote control, or **CLEAR** on the antenna base. -- appears.
- Enter the desired channel number using the remote control to tune to another channel position.

### DELETING ALL ANTENNA ANGLES

- Unplug the AC adapter from the jack on the back of the antenna base.
- Wait for 10 seconds, then synchronously hold down **L-TUNING** (◀) and **R-TUNING** (▶) on the antenna base and reconnect the adapter to the jack on the back of the antenna base. appears. All stored information is deleted.

## USING +/- GAIN CONTROL

If "snow" appears in the TV screen or the picture appears to be "rolling", rotate **+/- GAIN** on the back of the antenna base until the picture improves.

## SETTING A SECONDARY SOURCE

To use a second video source, such as cable TV, a satellite dish, or a video game system, press the power key on the remote control to turn off the power. The antenna automatically switches to the external input.

## TROUBLESHOOTING

We do not expect you to have any problems with your antenna, but if you do, these suggestions might help.

Problem	Suggestion
The antenna does not work or works poorly.	Turn off the antenna power then turn it on again. Be sure the AC adapter is properly and securely connected. Be sure the antenna power is turned on. If the power is turned on but the antenna still does not work, return it to the store.
While learning commands from a TV or universal remote control, the antenna does not respond.	Be sure the learning process is correct.
	Try the remote control's other keys.
	Try another remote control.

## CARE

Keep the antenna dry; if it gets wet, wipe it dry immediately. Use and store the antenna only in normal temperature environments. Handle the antenna carefully; do not drop it. Keep the antenna away from dust and dirt, and wipe it with a damp cloth occasionally to keep it looking new.

If your antenna is not performing as it should, take it to your local RadioShack store for assistance. Modifying or tampering with the antenna's internal components can cause a malfunction and might invalidate its warranty.

### NOTE

- To make room for more channels, delete some antenna angles (See "Deleting Stored Antenna Angles" on Page 3).
- The antenna can store 50 antenna angles for up to 99 channels, but its receiving range is limited to channels 1-69 according to TV broadcasting.
- After all stored antenna angles are deleted, **Er** flashes twice and appears when you turn on the antenna power.
- If you enter an invalid channel, **Er** flashes twice then that channel number appears. While the display is still flashing the invalid channel number, enter the correct number then press clear. Enter the correct channel number.

## THE FCC WANTS YOU TO KNOW

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the *FCC Rules*. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your local RadioShack store or an experienced radio/TV technician for help.
- If you cannot eliminate the interference, the FCC requires that you stop using your antenna.

Changes or modifications not expressly approved by RadioShack may cause interference and void the user's authority to operate the equipment.

SPECIFICATIONS

Frequency Range	
FM	88-108 MHz
VHF	50-230 MHz
UHF	470-860 MHz
UHF/VHF/FM Gain	20 dB Minimum
Gain Control Range	45 dB Minimum
Noise Figure	5 dB Maximum
Power Supply	12V DC 500 mA
Insertion Loss (Cable In)	VHF/UHF 4.5 dB Maximum
Weight	30 oz (850 g)
Dimensions (with Antenna Fully Extended) (HWD)	50 <sup>1</sup> / <sub>2</sub> × 10 <sup>1</sup> / <sub>4</sub> × 7 <sup>1</sup> / <sub>32</sub> Inches (1282 × 261 × 179 mm)

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

Limited Ninety-Day Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, 200 Taylor Street, 6th Floor, Fort Worth, TX 76102

12/99